

**E-Fund**

**enabling 21<sup>st</sup> century connectivity for learning**

**A Grant Opportunity from Pennsylvania's E-Fund Initiative**

**2008**

**Program Background, Guidelines  
and Application Instructions**

**Office of Information and Educational Technology  
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## **EDUCATION TECHNOLOGY FUND AND PROGRAM LEGISLATION**

The Education Technology Fund (E-Fund) of November 18, 2004 was established under Act 183 by the General Assembly of Pennsylvania as a part of the requirements for amended network modernization plans submitted by telecommunications companies. The legislation stipulates that non-rural telecommunications companies contribute a percent of their projected or actual increased revenues from their modernization to the Broadband Outreach and Aggregation Fund (BOAF) and to the Education Technology Fund (E-Fund).

Furthermore, the legislature tasked the Pennsylvania Department of Education (PDE) with establishing an Education Technology Program to disburse the funds obtained through E-Fund.

### ***Policy Objectives***

E-Funds will provide yearly grants from June 2005 until June 2011 to school entities for the following purposes:

- Purchase or lease of telecommunications services, infrastructure or facilities to establish and support broadband networks between, among and within school entities and not for the provision of telecommunications services to the public for compensation
- Purchase or lease of premises telecommunications network equipment and end-user equipment to enable the effective use of broadband networks between, among and within school entities and not for the provision of telecommunications services to the public for compensation
- Distance learning initiatives that use the foregoing broadband networks
- Technical support services for the activities described above

### ***Prioritized Applications***

In awarding the grants, PDE is required to give priority to the applications:

- That are submitted by school entities that seek funds for discounted broadband services or for broadband infrastructure, facilities or equipment from local exchange telecommunications companies which contribute to the E-Fund;
- That seek funds for regional networks that serve multiple school districts which are filed on behalf of multiple school districts and school entities or
- That are submitted by school entities that do not have broadband service, provided, however, that nothing shall preclude the Department from awarding funds to school entities for telecommunications services, infrastructure or facilities that provide bandwidths greater than 1.544 megabits per second (Mbps).

### ***Matching Funds Requirement***

Each applicant school entity is required to provide 100% matching funds to support each E-Fund grant request.

The following types of funds may be used to meet this requirement:

- Funds received from federal technology programs, such as the universal service support mechanism, for schools and libraries (relating to universal service or successor regulations)
- In-kind contributions
- Any other technology expenditures

Applicants should ensure they have adequate resources to enable the future support and maintenance of their requested solution following the funding period.

### ***Geographic Distribution***

The applications funded each year must be geographically dispersed throughout the Commonwealth.

## DATES AND ACTIVITIES

The following table is included as a reminder of deadlines that are related to the E-Fund application. You will be asked in the E-Fund application to verify that you have met these deadlines.

Date	Activity
At least 29 days prior to the October 24 submission date of the E-Fund grant application	Completed E-Rate Form 470(s)
Must be available during the Form 470 posting period, as above	Submit/post RFPs for E-Rate goods/services
Application submit date	Selection of vendor(s) as a result of the Form 470 and associated RFP must be included in the E-Fund application
Application submit date	All bids and associated addenda from RFPs are due and opened on or before submission of the E-Fund grant application
2:00 PM, Friday, October 24, 2008	E-Fund application closes (submit date) in eGrants

NOTE: Grants must be submitted through the online PDE eGrants application process <http://egrants.ed.state.pa.us/>.

## INTRODUCTION

PDE has established the E-Fund grant application process, consistent with the provisions of Act 183. This document describes that process.

### ***Managing Change and Measuring Success***

PDE recognizes that the educational needs, and the technical and market solutions that can best address those needs, will continue to evolve over the remaining years of the present E-Fund established by Act 183. Therefore, it is expected that PDE will need to adjust and adapt these E-Fund grant guidelines and the E-Fund application process in future program years to reflect these changes in Pennsylvania's needs and opportunities.

As the E-Fund grant process changes over time, PDE believes that clear objectives and a set of guiding principles can guide E-Fund applicants more successfully through the course corrections and changes that are sure to be needed as the E-Fund program matures. Therefore, this document provides objectives, guiding principles and sufficient background discussion so that PDE and stakeholders are able to properly evaluate the success of the E-Fund program over a time of change and challenge by using unchanging measures of success.

### ***Strategic Considerations***

Broadband technology is a tool for achieving success in education and, therefore, the Act 183 legislation provides for broadband technology and also supports a more general educational strategy. E-Fund grant applications may address as many of the following strategic considerations as are applicable.

- Enable technology and telecommunications services to prepare schools to embrace educational goals
- Connect educators and students throughout the Commonwealth to promote more easily and effectively the sharing of information, ideas and best practices
- Help enable more equitable, 24/7 access to instructional content and support among Commonwealth schools
- Create cost-efficient and effective tools for applications to help improve learning
- Build capacity for best practices in teaching and learning and student success by fostering content development and enabling content distribution, including distance learning to, and among, Commonwealth schools

## **FUNDING**

Funding is provided for eligible entities and projects.

### ***Eligible Applicants***

As defined in the legislation, only “school entities” are entitled to apply for E-Fund grants. “School entities” are defined in Act 183 to include traditional education institutions such as school districts, joint school districts and area career and technical schools. In addition, other K-12 education providers—intermediate units, independent schools, licensed private academic schools, accredited schools and any other public or nonpublic school serving students in any grade from kindergarten through 12th grade—may receive E-Fund grants.

Eligible school entity locations are those that are involved with activities that are integral, immediate and proximate to the education of K-12 students. Home schools are not eligible.

E-Fund grants will only be awarded for school-related use within Pennsylvania. As such, applicants must either be based in Pennsylvania or have a presence within Pennsylvania where all grant dollars will be directed.

School entities cannot apply for similar services or infrastructure on separate or in multiple grant applications within a single application year.

In order to receive a funding award, the applicant must have a valid Administrative Unit Number (AUN) at the time of the award.

### ***Eligible Use of Funds***

A proposal submitted under this initiative must clearly reflect the purpose and vision described in the policy objectives and guiding principles. PDE prefers not to fund personnel-related expenses; however, where justified, applicants may describe a business case necessity. As defined in the Policy Objectives, acceptable uses of E-Fund grants include the following.

#### **Telecommunications Services**

Funds may be used to purchase or lease telecommunications services such as T1, T3 and OC3 circuits, or advanced services such as ATM, MPLS, metro Ethernet and wireless. Applicants must describe how they have or will leverage E-Rate discounts to achieve maximum cost savings. It is preferred that funds be used for non-recurring charges (e.g., charges associated with infrastructure facilities build-out, one-time installation charges).

#### **Premises Network Infrastructure**

Premises infrastructure equipment includes hubs, routers, switches, internal wiring, network cards, load balancers or other premises equipment. These components are used to create local area and campus-wide networks. Wireless solutions also may be included. Funding also may be used to upgrade related power or cabling systems within existing buildings, if these upgrades are necessary to support the broadband technology deployment. All infrastructure and equipment procured through E-Fund grants must be retained within the eligible school entity property for three (3) full years after the initial purchase date.



## **Distance Learning Initiatives**

Grant applications that include both connectivity and content are allowed because educational curriculum and resources provided through technology offers the opportunity for improved student achievement. In conjunction with achieving the school entities' broadband connectivity goals, funds may be used to purchase educational software for students and faculty, such as subscription fees to online services, electronic books, integrated learning systems, intelligent tutors, instructional learning systems, curriculum management software or content distribution equipment, licenses or services.

Applicants that have classrooms connected to high-speed broadband may apply for funds to purchase equipment that will directly enable the applicant to provide and to receive distance learning activities. Equipment may include such things as video conferencing equipment, portable learning "consoles," satellite dishes, webcams, projectors, servers and content distribution switches. All equipment procured through E-Fund grants must be retained within the eligible school entity property for three (3) full years after the initial purchase date.

## **Technical Support Services**

E-Fund grants are allowed for related technical support services. Applicants must describe how any requested funds for such services (e.g., planning, design and engineering, installation) will be used to support infrastructure, network facilities, network and end-user equipment or distance learning initiatives. Applicants must show whether these related costs are based on hourly or fixed cost fees and must itemize such costs within their proposed budget.

Because the E-Fund is not intended to pay for basic recurring services, applicants should not include school personnel salaries or personnel-related costs in their grant applications, except when used as part of required matching funds.

Although applicants may find vendor assistance helpful in completing E-Fund applications, E-Fund or matching monies may not be used to pay for this service. If a vendor wishes to communicate with PDE related to an E-Fund application, a Letter of Agency (LOA) must be on file with PDE. This LOA must be from the LEA, on original letterhead, and signed by an individual with authority to authorize the request. This letter can then be mailed to PDE.

## ***Ineligible Uses of Funds***

The following list provides examples of ineligible uses for E-Fund grant awards.

- Administrative costs
- Indirect costs
- Personal computing devices, such as desktops, laptops and other end-user devices
- Any provision of telecommunications services to the public for compensation
- Storage Area Networks (SAN)
- Data warehouses
- Maintenance agreements
- Student Information Systems (SIS)
- Vendor assistance in writing the application for E-Funds

## ***Award Funding***

PDE recognizes the need to provide flexibility in funding various grant proposals (e.g., simple vs. complex, short- vs. long-term, small vs. large regions). As such, and to provide direction to grant applicants, the following subsections outline grant funding detail.

### **Award Size**

PDE estimates that grant awards will range from \$50,000 to \$1,000,000 based on the scope of the project. Larger budgets will be considered if a compelling case is made for such support, especially in cases of school entities applying together as a consortium.

### **Retroactive Costs**

Retroactive costs included as matching funds must be directly related to the items requested in the grant application. Matching funds may include those costs incurred on or after July 1, 2008.

### **Partial Awards**

Due to the limited funding available, and based on the evaluation of a grant application, PDE reserves the right to make grant awards for all or specific portions of an applicant's grant request.

### **Recurring Costs**

Requests for grant funds to offset non-recurring costs are preferred over grant requests that include recurring costs. However, applications seeking funds for a transitional recurring cost may be considered on a limited basis as long as (1) a sound business plan is presented that shows how the recurring cost will be independently funded within two years of initial grant funding and (2) it is shown that grant funding of the initial transitional recurring cost is absolutely essential to the success of the project.

Since E-Rate funds recurring costs, and schools should be able to sustain the ongoing costs after the infrastructure is installed, applicants are discouraged from applying for grant funds to cover recurring charges. Applicants cannot request recurring charges for more than the first two years of service and should explain how those costs will be supported thereafter.

Because E-Fund is not intended to pay for basic recurring services or to supplant current costs, applicants should not include school personnel salaries, personnel-related costs and annual software license fees and subscriptions in their grant applications. Applicant school entities are encouraged to use their own monies toward the matching fund requirement of this grant.

However, E-Funds can be used to hire technical and integration support, or project management, in order to implement the project. For example, an applicant may request funds for technical assistance in installation or project management. Additionally, if an applicant requests funding for an educational resource for distance learning, the proposal can include a funding request for contracting a trainer for professional development of teachers and administrators as part of their implementation plan.

### **Multi-Year Awards**

Recipients may apply for funding in consecutive grant cycles, or may apply for multiple-year funding in a single grant application. However, applicants applying in consecutive grant cycles are not guaranteed funding in subsequent cycles.

Although awardees of multi-year awards do not have to complete a full application in subsequent years of their multi-year award, they are required to complete a brief application in order for funds to be distributed via the eGrants system. The awards will be predetermined and only basic information will be collected.

Detailed project plans are required for all grant applications. PDE reserves the right to withhold future year(s) of funding should the grant recipient fail to meet its annual project objectives, or fail to justify to PDE that, despite such failure, the project is back on schedule and capable of delivering on all objectives within the overall project scope and timeframe.

### **Expenditure Timeline**

Applications must include a schedule estimating specific date of cost incurrence and payment expenditures. All invoices to PDE for money awarded for the 2008-09 Act 183 E-Fund year must be received, processed by PDE and then paid to the awardee no later than 6/30/09. Additionally, unexpended funds must be encumbered by the awardee for all purchases by 12/31/09, and all funds completely expended by 6/30/10.

Multi-year projects must adhere to reasonable expenditure plans. Please ensure that your project plan accounts for the fact that the funding in subsequent years may not be available until as late as April of the next year.

Should circumstances require deviation from the expenditure plan, as described in the applicant's E-Fund grant application, a formal waiver permitting such use outside of the approved plan must be obtained in a manner to be specified by PDE.

### **Declining an Award**

After an award is granted, if an educational entity that has signed a letter of intent withdraws from a consortium, all withdrawing LEAs must supply an official letter, signed by a duly authorized official with power to legally bind the parties, declining the grant and providing an explanation as to the reason for the withdrawal. The same requirement applies for an individual applicant not part of a consortium. This information will be reviewed by PDE for alignment to E-Rate and Act 183 E-Fund impact and requirements.

### ***Competitive Bidding***

Hardware, software, and all service acquisitions, including telecommunications and technical support services, eligible for payment with E-Funds must be acquired through a competitive bid process consistent with the bidding procedures of the Pennsylvania Public School Code and those of the school entity that is the Primary Applicant for the E-Fund grant. This requirement applies to all school entities, including public and non-public schools.

### **Satisfying the Requirement**

Purchases of hardware and software through the use of statewide contracts will satisfy this requirement, such as:

- PEPPM <http://www.peppm.org/pa/default.htm>

Budgets submitted for 2008 based on PEPPM pricing may need to be revised since, a) the current PEPPM contract expires December 31, 2008 and new competitively bid contracts will be awarded for 2009, b) a 2008 vendor may not be on the 2009 list and c) a 2008 product may be discontinued in 2009. For more information on PEPPM, see their website FAQs at <http://www.peppm.org/pa/services/faq.htm>

- IU13 [http://www.iu13.org/tech\\_software\\_main.shtml](http://www.iu13.org/tech_software_main.shtml)
- The COSTARS contract held by Pennsylvania's Department of General Services (DGS) <http://www.dgs.state.pa.us/costars/site/default.asp?dgsNav=|>
- Midwestern IU 4 SMART contract <http://www.smart.k12.pa.us>

Act 183 requires that priority be given to applications for acquiring broadband services provided by local exchange telecommunications companies contributing to the E-Fund. However it is extremely important that applicants understand that they are required to conduct a fair, open and unbiased competitive bidding process to select the lowest responsible bidder, where E-Fund contribution factors are not a part of the evaluation criteria. Additionally, this program is technology neutral and it is acceptable to submit proposals that use more than one technology to deliver service.

#### **E-Rate Competitive Bids Do Not Satisfy the Requirement**

In no way do any E-Fund-related competitive bids replace the E-Rate competitive bidding requirements. Likewise, competitive bidding via E-Rate does not satisfy the competitive bidding requirement of the E-Fund.

#### **Exemptions**

An exemption may be granted by PDE for the competitive bid requirement where vendors for eligible services/equipment already have been selected via a process that was initiated prior to the opening of the current application.

Competitively bid pre-existing contracts: To request an exemption, the Applicant must provide information concerning the effective date and the termination date of the pre-existing contract(s), whether the contract(s) was/were awarded based on a competitive bid process and identification of any contract renewal terms, automatic or not.

Information also should be included that points to an archive of the RFP and details the number of proposals received.

Non-competitively bid pre-existing contracts: If services relating to a previously signed contract were not competitively bid, applicants must prove the methodology used ensured the most cost effective service/provider was selected.

Note: Internet access funding requested must have been competitively bid according to the federal E-Rate guidelines. Applicants will be expected to show proof of having met this requirement.

By December 1, 2008, applicants must submit to PDE the name(s) of vendors that have been awarded through the formal RFP process. However, final contracts are not required to be signed until the E-Rate application deadline.

Because there is limited funding, it is extremely important that E-Fund applicants only request funding as is required to implement their project and that such funding be based

upon bids received. Such estimates should not be artificially inflated. Applicants should be prepared to document these costs, if requested to do so during the E-Fund grant scoring and evaluation process.

Applicants must contact PDE by December 1, 2008 to adjust their requested funding, if expenditures included in their final contracts with vendors are less than the amount originally requested from the E-Fund grant.

### ***Service Level Agreements***

If the applicant requests funds for telecommunications connectivity, the competitive bid request must require that each telecommunications provider's bid response commits to a specific Service Level Agreement (SLA) for service delivery.

The service delivery SLA information requested from providers is to be defined in terms of the project deliverable milestones contained in the project plan submitted as part of the E-Fund grant application.

SLA wording appropriate to the specific service and bid requirements should be based on the following example.

#### **SLA Example**

Provider shall submit a schedule that outlines each Party's responsibilities to meet service deliverables. Service(s) as listed will be available and operational to every Site on or before (specific month/day/year) and Provider agrees that failure to have the Service available and operational to any Site on or before (specific month/day/year) will involve the Site incurring additional cost(s) and expense(s).

Provider shall agree to specific contract language that imposes a SLA penalty due from the Provider for failing to deliver service to the Site(s) on the specific date(s) identified in the project schedule for each Site, as submitted by Provider in accordance with its bid submission and superseded by the project schedule as defined in the contract between the Provider and the School Entity Customer, if applicable. The SLA penalty shall be in the form of service credit(s) on the Provider's monthly billing to the School Entity Customer. The total credit due shall be equal to the sum of 1/30th of the Provider's monthly service charge per day per Site for (specific month/day/year) plus 1/30th of the Provider's monthly service charge per day per Site for each day thereafter that the Service is not available and operational to a Site.

For each Site where service delivery is delayed beyond 30 days, each site credit due will be multiplied by the number of 30 day periods outstanding from the initial delivery date for that site (e.g., 31 – 60 days late incurs a multiplier of two; 61 – 90 days late incurs a multiplier of three, etc.).

Should the School Entity Customer, including all participating school entities and/or partners, cause a delay that directly hinders the Provider from providing Service on or before (specific month/day/year), the School Entity Customer acknowledges the delay may cause harm to the Provider, and Customer agrees that Provider will not be held liable for penalties incurred due to failure to provide Service.

## ***Matching Funds***

Act 183 requires 100% matching funds from each E-Fund grant recipient and such costs must have been incurred on or after July 1, 2008, in order to qualify as matching funds. Applicants may use any directly related technology expenditure, including related federal grant dollars, E-Rate, in-kind contributions or on-site technical support costs. Act 183 allows the use of grant monies to meet the local matching funds obligation; applicants are required to articulate how all local matching funds and in-kind contributions directly support their initiative.

Applicants should ensure adequate funding and resources exist within the entity to enable future support and maintenance for the requested solution.

## ***E-Rate Leveraging***

E-Fund grant awards must be used to **augment or complement** E-Rate grant funding, wherever eligible. Leveraging both initiatives will help Pennsylvania school entities more quickly build interconnected networks that will enable enhanced learning opportunities for students and will provide maximum impact of both sources of funding.

Note: E-Rate is a federal discount program and E-Fund is a state grant program. The Pennsylvania Department of Education took extreme care to ensure that the guidelines for the E-Fund grant are aligned with and compliment the E-Rate rules and procedures. If the guidelines for the E-Fund are met, applicants should be able to receive E-Rate discounts on eligible services and be eligible for E-Fund grants.

In order to maximize E-Rate funding, the E-Fund has established the following requirements for compliance with both programs.

- **Priority 1 Services:** E-Rate provides discounts for telecommunications services and Internet access
  - All schools that meet the statutory definition of elementary and secondary schools found in the No Child Left Behind Act of 2001, 20 U.S.C. § 7801(18) and (38) and that do not have endowments exceeding \$50 million, regardless of their poverty level, are eligible to receive discounts ranging from 20%-90% on Priority 1 services.
  - Since all Pennsylvania public school entities are eligible for Priority 1 E-Rate funding, applicants for E-Funds are required to show that they have maximized or will maximize E-Rate as part of their E-Fund application, should it contain E-rate eligible Priority 1 services.
  - E-Fund will provide funding for the non-discounted portion of the E-Rate eligible service as described below.
- **Priority 2 Services:** E-Rate provides discounts for internal connections
  - Funding for Priority 2 services and equipment is provided to the highest-discount applicants; funding generally is not available to lower-discount applicants.
  - Applicants seeking E-Fund grants which qualify for an E-Rate discount of 85% or higher are expected to demonstrate that they have applied in E-Rate Funding Year 2008 or will apply for E-Rate discounts in E-Rate Funding Year 2009 for Priority 2 services and equipment, if their E-Fund grant contains Priority 2 services or equipment.

- E-Fund will provide funding for the non-discounted portion of the E-Rate eligible service as described below.
- For more information about the federal E-Rate program, please visit [www.e-ratepa.org](http://www.e-ratepa.org) or [www.sl.universalservice.org](http://www.sl.universalservice.org).

### Example

Suppose an E-Fund applicant with a 60% E-Rate discount shows in their E-Fund application that they selected a proposal from ABC provider where the non-recurring infrastructure installation charge is \$2,000,000 and the monthly recurring charge is \$50,000.

- E-Rate: E-Rate will pay for 60% of the non-recurring charge ( $\$2,000,000 \times 60\% = \$1,200,000$ ) and 60% of the monthly recurring charges ( $\$50,000 \times 60\% = 30,000$ ).
- E-Fund: E-Fund will consider grants for the non-discounted share ( $100\% - 60\% = 40\%$ ) of the non-recurring cost ( $\$2,000,000 \times 40\% = \$800,000$ .)
- Additional E-Fund Eligibility: If the success of the project is dependent on E-Funds paying for the initial recurring costs, the applicant could additionally request E-Funds for the non-discounted share of the monthly recurring costs for a maximum of two years ( $\$50,000 \times 40\% = \$20,000/\text{month}$  for up to two years).
- Prorating requirement: Applicants should pay careful consideration to E-Rate amortization rules when writing RFPs and signing contracts because E-Rate requires upfront or non-recurring charges, which are greater than \$500,000 to be prorated equally in E-Rate requests over a period of at least three years. The E-Rate service provider, however, is not required under E-Rate rules to amortize any of the non-recurring charges over three years. E-Rate rules only require that the E-Rate request be spread over three E-Rate funding years. Therefore, if an applicant cannot pay for the E-Rate discounted share of the non-recurring charge in full when installation is complete, they should include in their RFP and contract, language requiring that vendors agree to receive payments in three installments that coincide with E-Rate funding years.
- E-Fund does not have a prorating requirement so the Consortium could apply for an E-Fund grant of \$800,000 in the first year to pay the provider.

### E-Fund Compliance with E-Rate Rules

Because the 2008 E-Fund grant awards can cover existing Priority 1 services which began on or after July 1, 2008, or Priority 1 services that will begin anew on July 1, 2009, E-Fund grant money must be expended according to the following time tables in order to be compliant with the E-Rate program rule requirements.

- E-Rate Priority 1 funding year 2008
  - Service which began on or after July 1, 2008 and will be completed by June 30, 2009.
- E-Rate Priority 1 funding year 2009
  - Applicants requesting E-Funds for any Priority 1 E-Rate eligible services that will be purchased under a new procurement must apply for E-Rate funds for the E-Rate program year which begins on July 1, 2009. These applicants cannot purchase or obtain Priority 1 services or expend any approved E-Fund grants for E-Rate eligible

services before July 1, 2009, with one exception. E-Rate rules permit, in certain circumstances, that applicants may authorize service providers to begin the installation of new Priority 1 recurring service prior to the start of the E-Rate funding year (July 1, 2009), subject to meeting the following four conditions:

- Initiation of installation cannot take place before selection of the service provider, but no earlier than January 1, 2009; and
- The Priority 1 service must depend on the installation of the infrastructure; and
- The underlying Priority 1 service does not begin before July 1, 2009; and
- No E-Rate invoices can be dated prior to July 1, 2009 (unless the contract stipulates that upfront installation payments are required by the vendor in order for work to begin. In such cases, the vendor should explain in their invoice that the charges are for upfront, early payments consistent with the contract, and both parties should be prepared to explain to USAC invoicing reviewers that the arrangement is permissible under E-Rate rules).

Where E-Rate eligible Priority 1 services are included in the E-Fund grant application, E-Fund will grant no more than the non-discounted share of the cost. Applications must show, in detail, (1) the total cost of the project, (2) the applicant's E-Rate discount, (3) the amounts being requested from E-Rate and E-Fund, including a breakdown of how much funding is for non-recurring and recurring services, and (4) the local matches that are included.

- E-Rate Priority 2 Funding 2008
  - E-Rate Eligible Priority 2 equipment and services may have begun on or after July 1, 2008.
- E-Rate Priority 1 Funding year 2009
  - E-Rate eligible Priority 2 equipment and services may not be delivered or installed until July 1, 2009, the beginning of the E-Rate funding year. Therefore, in order not to jeopardize E-Rate funding, the E-Fund grant guidelines for E-Rate eligible services adopt the same requirements for applicants with an 85% and higher discount that are applying for E-Rate eligible Priority 2 services or equipment for the 2009 E-Fund funding year. The only exception to this is if the applicant applied for E-Rate funding of such equipment on their 2008 E-Rate Form 471 application.
- Non-E-Rate Eligible Items: Applicants requesting funds for any non-E-Rate eligible items or services may expend E-Fund awards between July 1, 2008 and December 31, 2009 for those specific items or services.

#### **E-Rate Requirements before Submitting the E-Fund Grant Application**

Because the RFP and competitive bidding process must be completed prior to submission of an E-Fund Grant Application, the following actions must have occurred.

- E-Rate Form 470(s) must have been posted at least 29 days prior to the submission of the E-Fund grant application and the associated RFPs must have been available during the entire Form 470 posting period; and
- All bids must be due and opened on or before submission of the E-Fund grant application in order to determine the actual cost of the project and, therefore, the amounts being requested in the E-Fund grant application.



## **E-Rate Requirements in the E-Fund Grant Application**

All 2008 E-Fund grant applications must include the following:

- For existing contracts (July 1, 2008 – June 30, 2009)
  - 2008 E-Rate Form 470 number(s) that correspond with the requested services
  - Applicant's Request for Proposal (RFP) and any associated addenda that correspond to the service(s) included in the E-Rate FY 2008 Form 470
  - The date that the RFP(s) was issued and the date that bid responses were due from vendors
  - Name of vendor(s) selected as a result of the Form 470 and associated RFP (include and identify primary and secondary vendors)
  - 2008 E-rate Form 471 number(s) that correspond with the requested services
- For new contracts (July 1, 2009 – June 30, 2010)
  - 2009 E-Rate Form 470 number(s) that correspond with the requested services must be submitted
  - Applicant's Request for Proposal (RFP) and any associated addenda that correspond to the service(s) included in the E-Rate FY 2009 Form 470
  - The date that the RFP(s) was issued and the date that bid responses were due from vendors; bids should be due and opened no later than October 24, 2008, the grant submission deadline
  - Name of vendor(s) selected as a result of the Form 470 and associated RFP (include and identify primary and secondary vendors)

## **IU Consortium Applicants**

If an Intermediate Unit (IU) is acting as a service provider and has an E-Rate Service Provider Identification Number (SPIN), then the IU cannot apply for E-Rate discounts (or E-Fund grants) on behalf of their consortium.

An IU is eligible to receive E-Rate discounts (and E-Fund grants) on behalf of their consortium, if three conditions are met:

- The IU is acting as the lead consortium member and is procuring services on behalf of themselves and their member entities; and
- The IU is not the service provider and
- The service provider was selected using an open, fair competitive bidding process.

## GRANT REQUIREMENTS AND GUIDING PRINCIPLES

The grant requirements are motivated by seven guiding principles. These guiding principles are provided for the benefit of both the applicant and PDE. The guiding principles will

- Guide grant applicants in developing proposals that ensure compliance with statutory instructions; and
- Provide a framework that ensures that PDE can effectively evaluate proposals for their strategic and technical merits.

### Seven guiding principles

1. Ensure adequate strategic thought and planning for the requested grant funded technology projects
2. Promote solutions that take advantage of innovative technology and pioneer replicable practices
3. Help ensure cost-efficient and effective methods for sharing instructional and learning information/content statewide
4. Promote regional solutions and collaboration for grant requests and awards
5. Leverage collaboration and support beyond the Act 183 grant program
6. Evaluate, impact and communicate experience
7. Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

These principles provide additional insight and recommendations that grant applicants can take into consideration as they plan and develop the technology projects and E-Fund grant applications to support those projects. Mandatory requirements for E-Fund grant applications are also included in this document.

### ***Intended Uses***

***Guiding Principle 1:*** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

Applicants must describe how their proposal satisfies one or more of the following Act 183 approved uses of E-Fund grants. For a detailed explanation, see the [Eligible Use of Funds](#) section.

- The purchase or lease of telecommunications services, infrastructure or facilities to establish and support broadband networks between, among and within school entities and not for the provision of telecommunication services to the public for compensation
- The purchase or lease of premises telecommunications network equipment and end-user equipment to enable the effective use of broadband networks between, among and within school entities and not for the provision of telecommunications services to the public for compensation
- Distance learning initiatives that use the foregoing broadband networks
- Technical support services for the activities described above

See the [Intended Uses](#) section of the application.

## **Project Team**

**Guiding Principle 1:** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

List the project management team and their responsibilities, including their credentials that support their selection for that role. Project management members may be affiliated with partner school entities; however, the Commonwealth encourages the primary applicant to retain lead management of the project.

See the [Project Team](#) section of the application.

## **Project Overview**

**Guiding Principle 1:** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

Applicants must provide a narrative overview of the project and how it relates to the Act 183 objectives. This overview should not use unnecessary and flowery language but rather present a simple, coherent summary. Applicants should describe how their proposed project will fulfill unmet needs.

See the [Project Overview](#) section of the application.

## **Project Plan**

**Guiding Principle 1:** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

Applicants must present a detailed project schedule that indicates project deliverables and associated milestones and tasks with dates. See the [Project Plan](#) section of the application.

SLAs are required for telecommunications providers and are required to be defined in terms of the project deliverables or milestones contained in the project plan submitted as part of the E-Fund grant application.

### **Grant Fund Expenditures**

The project plan must include a schedule estimating the dates of cost incurrence and payment expenditures. All E-Fund awards within a given fiscal year should be expended no later than 18 months following the close of that fiscal year (for example, FY2008 covers the period 07/01/2008 – 12/31/2009).

### **Multi-Year Projects**

You may present a less detailed plan for subsequent years of a multi-year project, to be refined each year of the project. Applications for multi-year projects must describe a stand-alone deliverable(s) due at the conclusion of each fiscal year: that is, the phase(s)

completed that year will provide connectivity or application delivery that will endure beyond the end of the reporting year.

Multi-year projects must adhere to reasonable expenditure plans. Multi-year project applications must detail a plan covering the entire project, which must be organized within a 12-month fiscal year boundary beginning July 1 and concluding June 30 of the following year.

See the [Project Plan](#) section of the application.

## **Strategic/Technology Plan**

**Guiding Principle 1:** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

All schools or school districts included in the E-Fund grant must give evidence of a strategic technology plan that supports the requested initiative. Further, entities included in the E-Fund grant should ensure that their technology plans comply with E-Rate regulations and required timelines for the funding year in which services will be provided.

Consortium grant proposals must discuss how this proposal aligns to the overall strategic technology plans of its member districts and, more importantly, demonstrates an overall plan to meet the entire consortium's technology vision. Using individual member's plans for reference, consortium applications should provide a vision overview for the entire group.

It is important to demonstrate how the proposed project supports the applicant's current strategic technology plan. Applicants should show forethought in areas of leadership, operational planning, cost of ownership, security and data recovery.

Upon award, grantees are required to update the educational technology portions of their strategic plans to include proposed E-Fund activity details in alignment to the established goals. Revised Educational Technology Plan reports should be submitted to PDE for review within 60 days of the January awardees summit.

See the [Strategic/Technology Plan](#) section of the application.

### **Technology Plans**

PDE, in collaboration with other education stakeholders, provides an Internet-based resource to help local education agencies develop strategic plans. Additional information may be found at [www.estratplan.org](http://www.estratplan.org) or [www.etechnanner.org](http://www.etechnanner.org).

All schools or school districts included in the E-Fund grant must also have adopted an Acceptable Use Policy and comply with the CIPA, PA Act 197, and all other state and federal legislation governing technology in education.

### **E-Fund Grant Technology Survey**

For each participating consortium member (or single member, in the case of an individual proposal), the consortium lead must complete the E-Fund Grant Technology Survey and return it to PDE on CD. Applicants may leverage the Pennsylvania Technology Inventory (PATI) for much of this information to minimize effort.

A copy of the E-Fund Grant Technology Survey will be posted on the PDE website at [www.pde.state.pa.us/Act183](http://www.pde.state.pa.us/Act183) through the hyperlink *Act 183 of 2004: e-Fund School Grant Program*. Completed surveys should be submitted to PDE via CD by the grant closing date, October 24, 2008.

The E-Fund Grant Technology Survey can be downloaded from [http://www.pde.state.pa.us/ed\\_tech/cwp/view.asp?Q=110337&A=169#survey](http://www.pde.state.pa.us/ed_tech/cwp/view.asp?Q=110337&A=169#survey).

## ***Sustainability***

***Guiding Principle 1:*** *Ensure adequate strategic thought and planning around requested grant funded technology projects*

Project sustainability plans must be part of the overall strategic technology plan. Proposed networks should minimize administrative effort and costs and the management model must be sustainable.

With regards to project sustainability, grant applicants must:

- Provide a detailed plan to sustain the proposed project/infrastructure beyond the initial grant funding period
- Provide an accounting of how they will sustain their projects' resources and activities (e.g., personnel costs, recurring charges/fees, etc.) after the end of the grant

To avoid scenarios where initiatives fail once grant funding terminates, requests for grant funds to offset non-recurring costs are preferred over grant requests that include recurring costs. However, applications seeking funds for recurring costs may be considered if a sound business plan is presented that shows how recurring costs will be independently funded within two (2) years of initial grant funding and that funding of initial recurring costs is absolutely essential to the success of the project. See the Guideline's discussion on [Recurring Costs](#).

See the [Sustainability](#) section of the application.

## ***Innovative Solutions***

***Guiding Principle 2:*** *Promote solutions that take advantage of innovative technology and pioneer replicable practices*

PDE encourages applicants to be innovative in proposing solutions to today's educational issues and to seek creative and competitive input from business partners to deliver connectivity, solutions, applications or other rich media content.

Leveraging technology solutions that converges data, voice, video and application services can help to decrease operational costs while enabling new and unique next-generation applications.

Highlight any solutions that may be relevant to other communities and that may be replicable.

Grant awardees will be expected to describe their experience with new technology within required progress reports. Success stories should identify how others may replicate these achievements.

See the [Innovative Solutions](#) section of the application.

## **Last Mile Solutions**

**Guiding Principle 2:** *Promote solutions that take advantage of innovative technology and pioneer replicable practices*

Applicants should evaluate new “last mile” solutions. These technologies are maturing rapidly and connectivity speed limits are being increased through continuous market innovation.

Technologies for last mile connectivity should be cost-effective. These last mile technologies may include, but are not limited to, the following:

- Metro Ethernet; Private line service (e.g., DS1, DS3, OC3); Wireless – Wi-Fi, Wi-MAX, non-registered radio frequency, Common Carrier Microwave Networks (CCMN), etc.
- DSL, Broadband Cable, Broadband Over Power Line, Satellite, Lit fiber (provider managed)

See the [Last Mile Solutions](#) section of the application.

## **Cost Efficiency and Leveraging Funding**

**Guiding Principle 3:** *Help ensure cost-efficient and effective methods for sharing instructional and learning information/content statewide*

See the [Cost Efficiency and Leveraging Funding](#) section of the application.

**Competitive Bids:** All school entities, including public and non-public schools, must acquire eligible E-Funds services and products through a competitive bid process. This must be consistent with the bidding procedures of the Pennsylvania Public School Code and those of the school entity that is the Primary Applicant for the E-Fund grant. This includes all hardware, software and service acquisitions, including telecommunications and technical support services. The request for proposal (RFP) for competitive bids must be completed before the E-Fund grant is submitted.

Note: Purchases of hardware and software through the use of statewide contracts, such as PEPPM, IU13, or other contracts held by Pennsylvania’s Department of General Services (DGS), will satisfy the requirement for competitive bidding.

See the [Competitive Bidding](#) section for exceptions and details.

### **Competitive Bid Rules:**

A. *New contracts:* Hardware, software and all service acquisitions, including telecommunications and technical support services, eligible for payment with E-Funds must be acquired through a competitive bid process consistent with the bidding procedures of the Pennsylvania Public School Code and those of the school entity that is the Primary Applicant for the E-Fund grant. This requirement applies to all school entities, including public and non-public schools. Exemptions may be granted, as defined in the *Competitive Bidding* section.

B. *Pre-existing contracts:* The Applicant must provide information concerning the effective date and the termination date of the pre-existing contract(s), whether the contract(s)

was/were awarded based on a competitive bid process and identification of any contract renewal terms, automatic or not. Information, also, should be included that points to an archive of the RFP and details the number of proposals received.

*C. Non-competitive pre-existing contracts:* If services relating to a previously signed contract were not competitively bid, applicants must prove the methodology they used to ensure that the most cost effective bid was selected.

### **Competitive Pricing**

If applicable, list the service providers selected as a result of the competitive bidding process that was conducted.

### **Flat-rate pricing**

Where school entities are applying for funds to be used for connectivity, they are encouraged to seek flat-rated pricing for all entities that are party to the grant application.

### **Consortium Participation**

RFPs for regional networks must require that vendors provide service to every entity in the consortium and may not pick and choose only certain entities they can service. It is recommended that the consortium include language in their RFPs that encourages vendors to partner with other vendors to guarantee that service can be provided to all entities within the consortium.

### **Demand Aggregation**

Applicants should seek to demonstrate local/regional demand aggregation. These coordinated efforts may lower pricing offered by broadband providers to educational entities and may have complementary and beneficial effects with other community members.

### **SLA Requirement**

If the applicant requests funds for telecommunications connectivity, the competitive bid request must require that each telecommunications provider's bid response commit to a specific SLA for service delivery.

Please refer to the [Service Level Agreement](#) section for a detailed explanation.

### **BOAF Coordination**

Act 183 also provided for the Broadband Outreach and Aggregation Fund (BOAF) to be administered by Pennsylvania's Department of Community and Economic Development (DCED). Where applicable, applicants should demonstrate that their local/regional economic effort has been coordinated with DCED and BOAF. Prospective E-Fund applicants should consult [www.newpa.com/broadband](http://www.newpa.com/broadband) to inquire about the status of implementation of BOAF.

## ***Regional and Collaborative Solutions***

***Guiding Principle 4:*** Promote regional solutions and collaboration for grant requests and awards

The *Regional and Collaborative Solutions* section of the application deals with members of the consortium or single applicant. It requires participation in a legally binding contract between its members and PDE.

Consortia can achieve greater cost savings through aggregation of demand. Therefore, applicants are encouraged to consider and actively seek other entities in the region that may wish to partner on the E-Fund project. Multiple school entities participating in a regional network will increase the buying power of the consortium by lowering the pricing offered by broadband providers to educational entities, as well as increase the potential evaluation scoring for their E-Fund grant application.

Applicants cannot apply for similar services or infrastructure on separate or in multiple grant applications, but may wish to submit a separate application for services outside of the scope of those applied for by the consortium. For example, an applicant may wish to participate in a consortium with other entities for network connectivity. This same applicant may also wish to submit another application for other services that do not include network connectivity.

Act 183 prohibits school entities from reselling telecommunications services to the public for compensation. In addition, no E-Funds can be distributed to a non-school entity.

If seeking funds for regional networks, the lead applicant must:

- Identify all consortium members by AUN and name
- Obtain letters of intent from each consortium member. The letters of intent are intended to prove that the school entities are aware that the lead applicant is applying for E-Funds on their behalf, and to commit the consortium members to the competitive bidding process and to the project
- Verify the status of each school entity in submitting PATI (PA Technology Inventory) data
- Describe the role of each consortium school entity and the benefits anticipated through these roles
- Identify all years of previous E-Fund awards any member has received from another application or whether a member is participating in another application this year
- Describe any creative solutions with consortium members

#### **PATI Survey**

All LEAs participating in an award will be required to complete the annual PATI survey for each year of the award. The PATI survey has two phases: the (1) Technology Phase consisting of the IU, LEA and School Technology surveys; and (2) the Instructional Phase consisting of the School Administrator and Teacher surveys.

PATI results are essential because they are used by PDE to determine relative need for funding for infrastructure and for distance learning. For the first year of an award, each member of a consortium will have been required to complete the Technology Phase in order to submit their application.

**IMPORTANT NOTE:** All LEAs participating in an award will be required to complete all subsequent phases of the PATI survey during the award contracts.

See the [\*Regional and Collaborative Solutions\*](#) section of the application.



## ***Strategic Alignment with Act 183***

### ***Guiding Principle 5: Leverage collaboration and support beyond the Act 183 grant program***

The *Strategic Alignment with Act 183* section of the application deals with partners to the consortium or single applicant. It does not require nor permit the partner to be legally bound to the E-Fund application.

School entities represent a substantial customer base with incredible purchasing power that may encourage or otherwise facilitate increased telecommunications availability to others in the community. Grant applications that include these broader benefits to the community may improve the strategic value of their application.

There is a growing body of experience that illustrates the power of public-private partnerships. These partnerships bring various parties together around common goals and demonstrate that others are willing to contribute additional resources to strengthen programs like the Act 183 E-Fund initiative. Applicants are encouraged to work with community groups or other interested parties to aggregate resources in their quest to provide enhanced learning opportunities via broadband.

Partnering opportunities should be explored, including partners that are not permitted to receive the direct benefit of obtaining E-Fund grant awards. Applicants are encouraged to develop creative solutions and partnerships that may include other educational institutions and higher educational institutions, libraries, local governments, hospitals and health care facilities (particularly those in rural and underserved areas), businesses, non-profits or economic development organizations. Per Act 183, school entities are prohibited from reselling telecommunications services to the public for compensation. In addition, no E-Funds can be distributed to a non-school entity.

Applicants should seek to demonstrate local/regional demand aggregation. These coordinated efforts may lower pricing offered by broadband providers to educational entities and may have complementary and beneficial effects for other community members.

If seeking funds for regional networks, lead applicants must:

- Identify all partnerships
- Describe the role of each partner and the benefits anticipated through these roles

The Department of Community and Economic Development (DCED) is charged under Act 183 with administering a Broadband Outreach and Aggregation Fund (BOAF). This fund is intended to educate citizens about the importance of broadband for use in the home and business, to identify and aggregate unmet demand for broadband, and to provide the incentive for encouraging providers to make the additional investments needed to build more broadband infrastructure and to interconnect new infrastructure with existing infrastructure throughout Pennsylvania. It is anticipated that the E-Fund and the BOAF will be used in synergy to improve broadband access to all Pennsylvanians.

In preparing an E-Fund grant application, applicants should contact DCED or investigate the broadband initiatives website <http://www.newpa.com/broadband> to get assistance in finding partnering opportunities. It is also recommended that applicants investigate local and regional economic development organizations as partners in leveraging E-Fund and BOAF objectives.

See the [Strategic Alignment with Act 183](#) section of the application.

## **Communications Plan**

**Guiding Principle 6:** *Evaluate impact and communicate experience*

Applicants must explain how they intend to share their project and its importance to the local educational community, as well as their general community. This should include an explanation of how education can be enhanced through the use of broadband technology and associated applications of broadband technology. This will help seed additional ideas and continue to encourage community partnerships. Awardees will be required to report on their implementation of this plan in mandatory progress reports.

See the [Communications Plan](#) section of the application.

## **Replication Feasibility**

**Guiding Principle 6:** *Evaluate impact and communicate experience*

Applicants must describe how they intend to share “lessons learned” and “best practice” solutions that can be leveraged and replicated by others in different regions of Pennsylvania, such as a project website and presentation at the Pennsylvania Educational Technology Expo and Conference (PETE&C) and other regional and national conferences. Updates on the progress in fulfilling this obligation will be required in mandatory progress reports to PDE.

See the [Replication Feasibility](#) section of the application.

## **Network Security**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

For client and server security, approaches such as SSL (Secure Sockets Layer) will be favored for consideration. Grants may be used to convert older applications to support web-based SSL.

Grants will favor low-cost approaches to network security such as MPLS/VPNs (Multi-Protocol Label Switching / Virtual Private Networks) for backbone implementations.

See the [Network Security](#) section of the application.

## **Internet Standards**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

One of the driving principles behind Act 183 is interconnecting school networks across the state in order to share knowledge and content, and to provide an enabler for next generation learning and collaboration tools. For applicants seeking funds for connectivity, IP addressing will be a major consideration for efficient interconnection. The school

entities should provide documentation regarding their currently used IP addressing block and any plans for future changes to their IP space.

Applicants seeking E-Fund grant awards that include plans to implement or use distance learning-related software/applications must ensure such software/applications can be accessed or delivered via standard Internet Protocol. All applications must be accessed or delivered via Internet standards, such as IP and XML as grants will only be made for networks and related equipment that use IP for addressing and transport. Grants can be used to convert older video systems with earlier protocols to IP.

E-Fund awards are intended to bring benefit, not only to the immediate awardee, but also to others across Pennsylvania to the extent that is possible. By ensuring that broadband applications are delivered via Internet standards, such as Internet Protocol and XML, it becomes possible for these applications to be accessible to the greater educational community.

See the [Internet Standards](#) section of the application.

## **Technology Standards**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

For applicants seeking funds for networks and related technology for connectivity, the following provides further guidance for establishing networks that will be flexible enough to support near- and long-term interconnectivity.

- Technologies should be based on the international standards organization's published standards (e.g., ITU, IEEE, IETF) and also should conform to national education technology standards (e.g., SIF, IMS, SCORM)
  - Where applicable, school entities should develop their applications and data interchange based on the Schools Interoperability Framework (SIF) standards
  - Routing protocols should be open standards and not proprietary to any one manufacturer
  - Switching and VLANs should not be based on any one vendor's proprietary technology
  - Interfaces should use standardized protocols so that equipment from different manufacturers can be connected on each end of a link
  - Video technologies should be based on IP multicast, PIM and H.323
- Access technologies that are being considered should be based on current or draft industry standards that are readily accepted among provider peers
- Avoid choosing legacy technologies that are near end-of-life

See the [Technology Standards](#) section of the application.

## **Network Foundational Support and Provision**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

Proposed networks should be reliable and highly available. This can be facilitated by using technology that is industry standard, provides some level of redundancy (keeping in mind cost-effectiveness) and avoids technology that is end-of-life (for which finding replacement parts or servicing may be challenging).

All proposed network technologies and systems must provide end-to-end interoperability. An objective of the E-Fund is to facilitate the implementation of a high-speed network of networks that enables the sharing of resources among state education entities. With many different approaches in use to implement school entity networks, network designers and administrators must recognize the importance of interoperability between each of the networks. Proposed networks should be based on open technology standards to the greatest extent possible.

E-Fund grant applications will be reviewed for the use of forward-looking network transport and security technologies that are expected to reduce overall costs, both in implementation and on an annual recurring basis.

Networks must support converged services like voice, video, traditional data and next generation services. Examples of new and emerging technologies are IP Video Conferencing; Web Conferencing; Multicast Content Delivery

See the [Network Foundational Support and Provision](#) section of the application.

## **Privacy and Data Security**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

Applicants should leverage cost-effective network security solutions that foster interoperability across Pennsylvania to or through various networks.

It is recognized that over the life of Act 183 security technology standards will change and improve, so these security technologies are only guidelines. Applicants should consider the cost effectiveness (i.e., business case) of technologies proposed.

Proposed technology should employ best practices for securing confidential data, as well as provide privacy to students, parents and teachers. For proposals where appropriate, these are mandatory requirements and awards will not be granted in their absence.

Applicants should describe their plans for the following types of pro-active and reactive security tools:

- Firewalls; content filtering; proactive security monitoring – intrusion detection systems; reactive security breach recognition, resolution and future prevention; virus protection; patch management

Different types of service will require different levels of security. If transported over the network, applicants should provide plans for securing the following types of IP traffic:

- Internet Access and Web content; email; teacher/student/parent interaction

## ■ Video over IP, Network Management Services

The grant application requests specific information, with choices from drop-downs in tables. The list of the possibilities is displayed in the copy of the online grant application in the last section of these guidelines, *E-Fund Application Format and Instructions*. There is also opportunity to address any possibilities not listed.

See the [Privacy and Data Security](#) section of the application.

## **Network Topology**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

Broadband refers to very high speed data connections to the Internet or other data networks. The minimum definition of broadband in Act 183 is 1.544 megabits per second (Mbps) for Internet (or educational networks) download speeds and 256 kilobits per second (Kbps) for upload to the Internet. For many school entities, their current networks already far surpass these minimum transmission speeds. For other school entities lacking broadband access, these minimum speeds provide a floor for the services that they wish to procure pursuant to the E-Fund grant application.

PDE's preference for minimum connectivity is a broadband circuit with throughput of at least 10 Mbps to each school building because certain broadband technologies, such as streaming video and virtual modeling, will not function or function well at slower speeds.

Proposed networks should minimize administrative effort and costs, and the management model must be sustainable.

See the [Network Topology](#) section of the application.

## **Scalability**

**Guiding Principle 7:** *Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support*

Network customer premises equipment (CPE) devices not only should be compliant with IP version 4, but also be capable of supporting version 6 (IPv6), which is the next generation IP addressing standard. It will use a 128-bit address format as opposed to the current 32-bit scheme and it will have many features built into the protocol, including security, auto-configuration and quality of service (QoS). Any equipment leased or purchased for the education networks should be capable of migrating to IPv6 in the future.

Applicants should show that proposed networks are scalable and allow for incremental growth to support applications and services today and in the future. Network designs should enable rapid deployment of network services and allow fast and efficient implementation of new applications and services.

Proposed networks should minimize administrative effort and costs, and the management model must be sustainable.

See the [Scalability](#) section of the application.

## **Budget**

- Submit an itemized budget showing evidence of at least 100% matching funds towards the technology to be deployed. See the [Matching Funds](#) section.
- Applicants must use E-Fund grant awards for the non-discounted share of the cost of the E-Rate eligible service; however, applicants must show the following in their grant budgets:
  - Total cost of the acquired service
  - Amount funded by E-Rate
  - Remaining balance (non-discounted share) for which the E-Fund award will be used

Detailed descriptions for completing the tables for the current year and subsequent years of the grant application follow. See the [Budget](#) sections of the application.

### **E-Rate**

An extensive discussion of this is found in the [E-Rate Leveraging](#) section. See the [Demographic Data](#) and [Budget](#) sections of the application.

### **Budget Detail: (Year 1)**

In all cases, applicants will be asked to submit an itemized budget with each grant application. The budget should show all matching funds.

The Budget Detail section line items have been broken down as follows: (1) Amount [requested through E-Funds], (2) E-Rate Funds, (3) Local Match and (4) Total Cost. This will allow the applicants to demonstrate that they have applied the E-Rate funds where necessary and that matching funds have been appropriately applied and that necessary percentages have been met.

Use the Local Match column in conjunction with the E-Rate Funds column in the Budget Detail section to show evidence of at least 100% matching funds towards the technology to be deployed for the proposed project. The total matching funds must equal the total requested grant amount; the matching funds are not at the item level.

Local Match (total) + E-Rate Funds (total) = Amount (E-Funds Request total), where Amount equals the total requested grant amount.

If applicable, also demonstrate how E-Rate funding will be leveraged to achieve maximum cost savings by showing 1) all E-Rate eligible equipment and services; 2) the total cost of the acquired service; 3) the amount funded or to be funded by E-Rate and the applicable funding year and, 4) the remaining balance (non-discounted share) for which the E-Fund award will be used.

The grant application limits the choices to the eligible expenditures; these are listed in drop-downs in tables. The list of the eligible expenditures for all years is displayed in the copy of the online grant application in the last section of these guidelines, [Budget Detail: 2008-2009](#).

**Future Budget: Years 2, 3, 4**

In all cases, applicants will be asked to submit an itemized budget with each grant application. The budget should show all matching funds.

Use the itemized budget template to show evidence of at least 100% matching funds towards the technology to be deployed for the proposed project.

If applicable, also demonstrate how E-Rate funding will be leveraged to achieve maximum cost savings by showing 1) all E-Rate eligible equipment and services; 2) the total cost of the acquired service; 3) the amount funded or to be funded by E-Rate and the applicable funding year and 4) the remaining balance (non-discounted share) for which the E-Fund award will be used.

## PROPOSAL SELECTION PROCESS AND TIMELINE

The following outlines the schedule for E-Fund application submission and award, and the telecommunications assessment. Any changes in the timeline will be posted to the website.

### Schedule

<b>July 18, 2008</b>	<b>Grant guidelines issued</b>
<b>July 21, 2008</b>	<b>Online eGrant Application opens</b>
June 30, 2008	Telecommunications companies are assessed an annual fee to fund the E-Fund grant
October 31, 2008	The first equal installment of the annually assessed fee is due from the telecommunications companies
<b>October 24, 2008 2PM</b>	<b>Completed Online eGrant Applications are due to the Department</b>
November 2008	Each proposal will be scored based on whether the proposal reflects the objective and guiding principles of the E-Fund. Additional financial, operational or technical information, if requested, must be provided within four business days of the request. Requests for information do not imply that a proposal will be funded
<b>December 1, 2008</b>	<b>Applicants must report to PDE the selected vendor(s) and final budget for their E-Fund projects</b>
<b>December 12, 2008</b>	<b>Anticipated grant award announcement date</b>
January 31, 2009	The second equal installment of the annually assessed fee is due from the telecommunications companies



## EVALUATION

A review panel will be convened to evaluate proposals. Each section will be rated according to the topics listed below. Grant awards will be based on available funding, proposal evaluation and strategic value.

Act 183 requires that E-Funds be dispersed geographically with priority given to applications (1) for connecting broadband services to school entities without such service, (2) for creating or expanding regional networks or (3) for acquiring broadband services provided by local exchange telecommunications companies contributing to the E-Fund. PDE will factor in these priorities in its application review process.

- |   |  |
|---|--|
| 1. Intended Uses                          | 12. Communications Plan                    |
| 2. Project Team                           | 13. Replication Feasibility                |
| 3. Project Overview                       | 14. Network Security                       |
| 4. Project Plan                           | 15. Internet Standards                     |
| 5. Strategic/Technology Plan              | 16. Technology Standards                   |
| 6. Sustainability                         | 17. Network Foundational Support/Provision |
| 7. Innovative Solutions                   | 18. Privacy and Data Security              |
| 8. Last Mile Solutions                    | 19. Network Topography                     |
| 9. Cost Efficiency and Leveraging Funding | 20. Scalability                            |
| 10. Regional and Collaborative Solutions  | 21. Budgets for All Years Proposed         |
| 11. Strategic Alignment with Act 183      |  |

## APPLICATION DEADLINE AND SUBMISSION RULES

Applications must be received by 2:00 p.m., Friday, October 24, 2008. Grants must be submitted through the online PDE eGrants application process

<http://egrants.ed.state.pa.us/>. It is PDE's intent to have only one (1) grant cycle per year; however, PDE reserves the right to initiate additional submission cycles.

## GRANT PREPARATION COSTS

Vendors may assist in completing the E-Fund application, but this service may not be paid for using either E-Funds or matching monies under any circumstances. To communicate with PDE on an E-Fund application, vendors must have a Letter of Agency (LOA) on file. This LOA must be from the LEA, on original letterhead and signed by an individual with the authority to authorize such a request. This letter can then be mailed to PDE at:

E-Fund Attachments  
James Beeghley  
Bureau of Educational Technology  
PDE  
333 Market Street 14<sup>th</sup> floor  
Harrisburg, PA 17126-0333

## **REPORTING AND AUDIT REQUIREMENTS**

Following notification of award, each E-Fund grant applicant (School Entity) must enter into a contract (E-Fund Contract) with the Pennsylvania Department of Education (PDE) covering the terms and conditions of the grant award.

### **Interim Reporting Requirement**

As part of the E-Fund contract, each funded project is required to submit budget and narrative progress reports. The format and frequency will be provided following award.

Yearly reports are required describing how the use of infrastructure, supported by professional development and eLearning resources, impacts 21<sup>st</sup> century teaching and learning, and communication. Details will be provided upon award.

### **GAAP Audit Requirement**

For any grant award in excess of \$499,999 over the life of an award or multi-year award, a final audit of the entire E-Fund Contract between PDE and the School Entity is required within 120 days after termination of project activities but no later than 120 days after the June 30 deadline for funds expenditures. This audit and associated costs are the responsibility of the School Entity Contractor.

A Project Audit must be performed by a certified public accountant. The School Entity is responsible for securing a qualified, independent auditor; however PDE reserves the right of selection or prior approval of the independent auditor to perform the audit. The Project Audit must be a financial audit and conducted in accordance with the U. S. Accounting Office's Government Auditing Standards, current revision. Unless otherwise authorized by PDE, the audit must include those funds received under this E-Fund Contract as well as required matching funds and encompass the entire Contract Activity Period. Other grant periods may also be specified at the discretion of the PDE and the PDE reserves the right to designate additional compliance factors for state financial assistance programs.

The PDE will determine any overpayment or underpayment and any additional auditing deemed necessary and inform the School Entity Contractor of the settled amount.

The School Entity Contractor agrees that if the final audit of the E-Fund Contract as accepted by the PDE or any duly authorized representative discloses that the full amount of the E-Fund Contract was not required to complete the project or that funds were improperly used, then the funds unused, improperly used or expended, but not required to complete the project, shall be repaid to the E-Fund with interest unless otherwise directed by the PDE.

The Commonwealth reserves the right for state agencies or their authorized representative to perform additional audits of a financial or performance nature, if deemed necessary. Any such additional audit work will rely on work already performed by the Contractor's auditor, and the costs for any additional work performed by state or federal agencies will be borne by those agencies at no additional expense to the School Entity Contractor.

In no event shall any E-Fund grant be used for any costs associated with the E-Fund audit requirement.

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## E-FUND APPLICATION FORMAT AND INSTRUCTIONS

Applications must be submitted online through PDE's eGrants application process, accessed at <http://egrants.ed.state.pa.us/>. The required E-Fund technology survey and budget templates are available at <http://www.pde.state.pa.us/Act183>.

This section provides a copy of the E-Fund application, along with a narrative description of the questions aligned with the E-Fund Guiding Principles, to help applicants prepare to complete their online submission.

### IMPORTANT NOTES:

- **All applications must be completed online**
- If you have any problems during the application process, please submit them online at <http://egrants.ed.state.pa.us/v2/support/onlineSupport.asp>
- All required CD content, with the exception of the Technology Survey, must be submitted in PDF format. Files may be generated in any application as long as they are converted to PDF format for submission. The Technology Survey should be returned as an Excel spreadsheet. CD instructions are on the first page of the eGrants application
- All questions are considered "Mandatory," unless marked as "Optional." The grant cannot be submitted unless all mandatory questions are completed
- Completion of "Recommended" sections is suggested – where applicable according to the proposed project scope, initiative and technology used – to allow PDE to review and evaluate the grant application more fully
- There is a 60-minute time limit between "Saves" for completing each screen of the online grant application. To prevent screen timeouts and the loss of valuable information, create all application answers in a text document and then copy/paste the answers into the online application
- The eGrants application displays applicant data in text-only formatting. By creating your application in a text file (e.g., Notepad) and then copying/pasting it into the online application, you ensure your online application is formatted exactly as you intend
- Each question lists the maximum number of characters allowed in the response. Characters include spaces, commas, all other characters and paragraph marks.
  - A paragraph mark counts as two characters
  - 125 characters is about a sentence
  - 500 characters is approximately a brief paragraph
  - 5,000 characters is about a page and a half
  - 10,000 characters is about three pages
- HELP buttons contain information that may be useful in completing a response
- For ease of reference, application questions are numbered sequentially
- When opening a new application, any dollar amount may be entered; the amount automatically will update according to your budget
- The "Multi-Year" applications are for subsequent years of original awards only, not new applications

### **Contact Information**

- Name of person completing this application
- Phone number of person completing this application (format xxx-xxx-xxxx)
  - Extension, if applicable (Optional)
- Email address of person completing this application

### **Summary Demographic Data**

Please provide the following summary demographic data for this proposal:

- Number of students served
  - Number of entities served in the application (district level, not building level)
  - Average poverty level based on US census data
  - 2009 anticipated E-Rate discount
  - The E-Rate Form 470 Number for 2009 E-Rate Year that corresponds with the services requested in the E-Fund grant application
  - The E-Rate Form 470 Number for 2008 E-Rate Year that corresponds with the services requested in the E-Fund grant application, if applicable
  - E-Rate Form 471 Number for 2008 E-Rate Year, if applicable
  - Number of square miles covered
  - Average number of people per square mile
  - List all counties served by your application
- 

### **CD Contents**

Submit the following information on CD to PDE, postmarked by the application deadline, October 24, 2008, and mailed with return receipt. Include two copies of the CD. Mail to:

E-Fund Attachments  
James Beeghley  
Bureau of Educational Technology  
PDE  
333 Market Street 14<sup>th</sup> Floor  
Harrisburg, PA 17126-0333

Include on the CD:

- A copy of each RFP submitted, including any addenda, in PDF format (see Cost Efficiency and Leveraging Funding application section)
- A network security diagram in PDF format (see Network Security application section)
- A network diagram in PDF format (see Network Topology application section)
- The E-Fund Grant Technology Survey in an Excel spreadsheet (see Strategic/Technology Plan application section)

**Verification:**

I have included on the CD a PDF copy of each RFP, with associated addenda:

- Yes/No

I have included on the CD a PDF copy of the network security diagram:

- Yes/No

I have included on the CD a PDF copy of the network diagram:

- Yes/No

I have included on the CD the Excel spreadsheet containing the Technology Survey (downloaded from

[http://www.pde.state.pa.us/ed\\_tech/cwp/view.asp?Q=110337&A=169#survey](http://www.pde.state.pa.us/ed_tech/cwp/view.asp?Q=110337&A=169#survey)). The Technology Survey is required for all applications.

- Yes/No/NA

## ***Intended Uses***

Act 183 specifies that E-Fund grants funding may be approved for projects seeking assistance in acquiring any of the following categories of technology or related services. Indicate for which purpose(s) funds are being requested. (At least one item must be selected.)

Compliant E-Fund Policy Objectives:

- A. Purchase or lease of telecommunications services, infrastructure or facilities to establish and support broadband networks between, among and within school entities and not for the provision of telecommunication services to the public for compensation
  - B. Purchase or lease of premises telecommunications network equipment and end-user equipment to enable the effective use of broadband networks between, among and within school entities and not for the provision of telecommunications services to the public for compensation
  - C. Distance learning initiatives that use the foregoing broadband networks
  - D. Technical support services for the activities described above
1. Select the letter of the objective from the above list of 'Compliant E-Fund Policy Objectives.' Describe your use to fulfill that objective and its anticipated benefits. Add as many rows as are needed to fully describe your project. (At least one objective must be listed.)

### Mandatory

<b>Objective (Enter A, B, C, or D)</b>	<b>Description of Use</b>	<b>Anticipated Benefit</b>
Drop-down list	Textbox: 500 characters	Textbox: 500 characters



## ***Project Team***

Principle: Ensure adequate strategic thought and planning around requested grant funded technology projects

2. List the members of the project's management team and their affiliation. Indicate the project responsibilities for each member and the credentials that support the selection of the member for that role. Include contact phone number.

### Mandatory

Team Member	Affiliation	Responsibilities	Credentials	Phone Number (xxx-xxx-xxxx)
Textbox: 50 characters	Textbox: 50 characters	Textbox: 500 characters	Textbox: 500 characters	

---

## ***Project Overview***

Principle: Ensure adequate strategic thought and planning around requested grant funded technology projects

Question	Response
3. What do you intend to accomplish with your project?	Textbox: 5,000 characters <a href="#">Mandatory</a>

## ***Project Plan***

Principle: Ensure adequate strategic thought and planning around requested grant funded technology projects

4. Complete the following table with details of tasks, milestones and deliverables from your project plan, ordered by date. List milestone dates in the Start Date column. Include estimates of dates of cost incurrence and payment expenditures. For multi-year projects, describe stand-alone deliverables due at end of each subsequent year. Expenditures include E-Funds, E-Rate, and matching funds.

NOTE: The competitive bid request for funds for telecommunications connectivity requires commitment to a specific Service Level Agreement (SLA) for service delivery for each telecommunications provider's bid response. Define any SLA information requested from providers in terms of project deliverables or milestones.

### Mandatory

<b>Start Date (format: mm/dd/yyyy)</b>	<b>Tasks / Milestones</b>	<b>Deliverables</b>	<b>End Date (format: mm/dd/yyyy)</b>	<b>IU # or School ID</b>
[date]	Textbox: 250 characters	Textbox: 250 characters	[date]	

## ***Strategic/Technology Plan***

Principle: Ensure adequate strategic thought and planning around requested grant funded technology projects

Question	Response
5. Indicate whether the E-Fund Grant Technology Survey spreadsheet has been completed for each school entity included as part of the grant application.	Yes/No <a href="#">Mandatory</a>
6. Indicate whether all schools or school districts included in the E-Fund grant have a strategic technology plan that supports the requested initiative, including an Acceptable Use Policy.	Yes/No <a href="#">Mandatory</a>
7. Discuss how this proposal fits into the overall strategic technology plan(s) of the grant applicant(s).	Textbox: 10,000 characters <a href="#">Mandatory</a>

**Include on the CD the Excel spreadsheet containing the E-Fund Grant Technology Survey.**

---

## ***Sustainability***

Principle: Ensure adequate strategic thought and planning around requested grant funded technology projects

Questions	Response
8. How do you plan to sustain the proposed project/infrastructure beyond the initial grant funding period?	Textbox: 5,000 characters <a href="#">Mandatory</a>

Questions	Response
9. How do you plan to support the project's resources and activities (e.g., personnel costs, recurring charges/fees, etc.) after the end of the grant funding period?	Textbox: 7,500 characters <a href="#">Mandatory</a>

### ***Innovative Solutions***

Principle: Promote solutions that take advantage of innovative technology and pioneer replicable practices

Question	Response
10. Describe any innovative solution proposed to address current educational issues that may include seeking creative and competitive input from partners to deliver connectivity, solutions, applications or other rich media content.	Textbox: 5,000 characters <a href="#">Recommended</a>

---

### ***Last Mile Solutions***

Principle: Promote solutions that take advantage of innovative technology and pioneer replicable practices

Question	Response
11. Describe any innovative 'last mile' technologies being proposed, emphasizing those that deal with connectivity to the LEA's primary demarcation point.	Textbox: 2,000 characters <a href="#">Recommended</a>

## ***Cost Efficiency and Leveraging Funding***

Principle: Help ensure cost-efficient methods for sharing instructional and learning information/content statewide

Respond to A, B or C for the competitive bidding requirement:

- A. New Contracts: Describe how hardware, software and all service acquisitions, including telecommunications services, eligible for payment with E-Funds will be acquired through a competitive bid process consistent with the policies of the Pennsylvania Public School Code bidding requirements and those of the school entity that is the primary applicant for the E-Funds grant, as well as the E-Rate competitive bidding requirements.
- B. Competitively bid pre-existing contracts: the Applicant must provide information concerning the effective date and the termination date of the pre-existing contract(s), whether the contract(s) was/were awarded based on a competitive bid process and identification of any contract renewal terms, automatic or not.
- C. Non-competitively bid pre-existing contracts: If services relating to a previously signed contract were not competitively bid, applicants must prove the methodology they used to ensure that the most cost effective bid was selected. Type in the number of proposals received, and include the RFPs on the CD.

12. Describe your response for each contract, according to the bidding requirement as described in A, B and C. Add as many rows as needed to describe each contract for which E-Funds are requested.

NOTE: For each new contract, you must include the date the RFP was issued and the date the responses were due from the vendors. All bids must be due and opened on or before October 24, 2008.

Option box (A, B, C)	Explain each RFP or contract	RFP Issue Date	Bid Opening Date	[Add button]
<a href="#">Mandatory</a>	Text: 3,000 characters	MM/DD/YYYY	MM/DD/YYYY	

Question	Response
13. If applicable, list the service providers selected as a result of the bidding process that was conducted, including any subcontractors that may be used by the prime vendors.  If services have not yet been awarded, provide the date such vendors will be selected. This date must be on or before December 1, 2008, and the selection immediately forwarded to PDE. (Note: If not applicable, enter N/A in the textbox.)	Textbox: 1,000 characters  <a href="#">Mandatory</a>

Question	Response
14. If applicable, describe any results for plans of obtaining flat-rated pricing for all consortium members and partners that are party to the grant application and how service will be provided to all entities that were party to the original RFP. (Note: If not applicable, enter N/A in the textbox.)	Textbox: 2,500 characters <a href="#">Recommended</a>
15. Describe any applicable local or regional demand aggregation. Note any complementary and beneficial effects to other community members. (Note: If not applicable, enter N/A in the textbox.)	Textbox: 5,000 characters <a href="#">Recommended</a>
16. For funds requested for telecommunications connectivity, the competitive bid request must require that each telecommunications provider's bid response commit to a specific Service Level Agreement (SLA) for service delivery.  What SLAs are required of the telecommunications provider by the RFP? (Note: If not applicable, enter N/A in the textbox.)	Textbox: 1000 characters <a href="#">Mandatory</a>
17. Where applicable, applicants should demonstrate that their local/regional economic effort has been coordinated with the Department of Community and Economic Development (DCED) and Broadband Outreach and Aggregation Fund (BOAF). (Note: If not applicable, enter N/A in the textbox.)	Textbox: 2,500 characters <a href="#">Recommended</a>

**Include a copy in PDF format on a CD of each RFP submitted, along with any addenda.**

## ***Regional and Collaborative Solutions***

Principle: Promote regional solutions and collaboration for grant requests and awards

18. Identify any consortium members (or the applicant for individual applications), and indicate whether Letters of Intent have been received from each school entity. Briefly summarize their role and anticipated benefits to the community. Indicate any entity that has, or this year will, participate in another application.

[Mandatory](#)

AUN	Name of consortium member	Letter of Intent	2007 – 08 PATI Phases Submitted	Role	Anticipated benefit	List years of any previous E-Fund grant awards
Textbox: 9 characters	Textbox: 50 characters	Yes/No	[dropdown]	Textbox: 75 characters	Textbox: 125 characters	

---

Question	Response
19. If applicable, describe the development of any creative solutions with consortium members.	Textbox: 5,000 characters <a href="#">Recommended</a>

## ***Strategic Alignment with Act 183***

Principle: Leverage collaboration and support beyond the Act 183 grant program

20. If applicable, identify any partnerships with the community (other educational institutions, libraries, local governments, hospitals, businesses, non-profits, community groups, economic development organizations or other interested parties) and briefly summarize their role and anticipated benefits to the community.

NOTE: Act 183 prohibits school entities from reselling telecommunication services to the public for compensation. In addition, no E-Funds can be distributed to a non-school entity.

[Recommended](#)

Name of Partner	Role	Benefit to Project
Textbox: 100 characters	Textbox: 125 characters	Textbox: 500 characters

Question	Response
21. If applicable, describe the development of any creative solutions with these partnerships.	Textbox: 5,000 characters <a href="#">Recommended</a>
22. Describe any efforts to work with community groups or other interested parties to aggregate resources in the quest to provide enhanced connectivity and learning opportunities per Act 183.	Textbox: 5,000 characters <a href="#">Recommended</a>
23. Describe any solutions that will benefit the surrounding community.	Textbox: 5,000 characters <a href="#">Recommended</a>



## ***Communications Plan***

Principle: Evaluate impact and communicate experience

Questions	Response
24. Describe your communications plans to share your experiences with residents and other community members.	Textbox: 5,000 characters <a href="#">Mandatory</a>
25. Describe how you intend to communicate the project goals, plans and outcomes to the administration and teachers in your project. Include an explanation of how you will inform the administration and teachers of the new technology that is now available to them.	Textbox: 5,000 characters <a href="#">Mandatory</a>

---

## ***Replication Feasibility***

Principle: Evaluate impact and communicate experience

Questions	Response
26. Describe how you intend to share "lessons learned" and "best practice" solutions that can be leveraged and replicated by others in different regions of Pennsylvania.	Textbox: 4,000 characters <a href="#">Mandatory</a>

## ***Network Security***

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

Questions	Response
27. Indicate whether client and server security will include SSL (Secure Sockets Layer).	Yes/No option <a href="#">Mandatory</a>
28. Describe your approach to backbone network security such as MPLS/VPNs/VLAN (Multi-Protocol Label Switching/ Virtual Private Networks/Virtual Local Area Network).	Textbox: 5,000 characters <a href="#">Mandatory</a>

**Include on the CD a PDF file of your network security diagram.**

---

## ***Internet Standards***

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

[Mandatory for Software or Content Applications](#)

Question	Response
29. Describe how any broadband application will be accessed or delivered via Internet standards, such as Internet Protocol and XML to ensure that others throughout Pennsylvania could benefit from your project. Describe how your technology will be able to connect with regional and state-wide educational entities.	Textbox: 2000 characters

## Technology Standards

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

Questions	Response
30. Check all technology standards that apply:	Checkbox options <ul style="list-style-type: none"><li>■ IEEE (Institute of Electrical and Electronics Engineers)</li><li>■ IETF (Internet Engineering Task Force)</li><li>■ IMS (Independent Media Supply)</li><li>■ ITU (International Telecommunication Union)</li><li>■ SCORM (TM) (Sharable Content Object Reference Model)</li><li>■ SIF (Schools Interoperability Framework)</li><li>■ None</li><li>■ Other (Describe below)</li></ul> <a href="#">Mandatory</a>
31. Describe the "Other" technology standards below:	Textbox: 1,000 characters <a href="#">Recommended</a>

Questions	Response
32. Routing protocols are open standards and not proprietary.	Yes/No/Not Applicable <a href="#">Mandatory</a>
33. Switching and VLANs are not proprietary technology.	Yes/No/Not Applicable <a href="#">Mandatory</a>
34. Interfaces use standardized protocols so that different manufacturers' equipment can be connected.	Yes/No/Not Applicable <a href="#">Mandatory</a>

35. Video technologies are based on IP Multicast, PIM and H.323.	Yes/No/Not Applicable <a href="#">Mandatory</a>
--	--

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### ***Network Foundational Support and Provision***

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

[Recommended where applicable](#)

Questions	Response
36. Discuss plans to ensure that networks will be reliable and highly available.	Textbox: 5,000 characters

[Mandatory for WAN infrastructure buildout](#)

Questions	Response
37. Describe end-to-end interoperability plans for all leased or network-related equipment and how the network will be able to support converged services like voice, video, data and next-generation services.	Textbox: 5,000 characters

## Privacy and Data Security

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

[Recommended, where applicable](#)

38. Proposed technology should employ best practices for securing confidential data, as well as provide privacy to students, parents and teachers. Where appropriate, describe plans for the following types of pro-active and reactive security tools:

Security Tools [drop-down includes the following possibilities]	Describe Plans
[Content filtering]	[275 char textbox]
[Firewalls]	
[Patch management]	
[Proactive security monitoring-intrusion detection systems]	
[Reactive security breach recognition, resolution and future prevention]	
[Virus protection]	

39. Different types of service will require different levels of security. For all traffic over the network, applicants should provide plans for security. Where appropriate, describe plans for securing the following types of IP traffic:

IP Traffic [drop-down includes the following possibilities]	Describe Plans
[Email]	[275 char textbox]
[Internet access/Web content]	
[Network management services]	
[Teacher/student/parent interaction]	

Question	Response
40. Describe any other methods for security of confidential data, privacy to students and teachers or IP traffic, not listed in the foregoing tables.	Textbox: 10,000 characters <a href="#">Recommended, where applicable</a>

## ***Network Topology***

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

[Mandatory for Wide-Area Network Infrastructure Build-Outs](#)

Question	Response
41. Describe the backbone infrastructure that supports telecommunications services, including current and future Internet Protocol (IP) addressing.	Textbox: 2,500 characters

**Include on the CD a network diagram in PDF format.**

## **Scalability**

Principle: Build interconnected networks that are IP-based, open and accessible to enable future expansion and cost-efficient support

Question	Response
42. Is all equipment leased or purchased for the education networks compliant with IPv4 and capable of migrating to IPv6?	Yes/No <a href="#">Mandatory</a>
43. Is a 128-bit address format used?	Yes/No <a href="#">Mandatory</a>
44. Briefly state the security features built into the protocol. Enter N/A if not applicable.	Textbox: 1000 characters <a href="#">Recommended</a>
45. Briefly explain the quality of service (QoS) built into the protocol. Enter N/A if not applicable.	Textbox: 1000 characters <a href="#">Recommended</a>
46. Briefly describe the auto-configuration. Enter N/A if not applicable.	Textbox: 1000 characters <a href="#">Recommended</a>
47. Describe the scalability of the proposed networks to allow for incremental growth to support applications and services today and in the future. Enter N/A if not applicable.	Textbox: 5000 characters <a href="#">Mandatory</a>

## **Budget Narrative**

This section provides guidance on completing the columns of the tables in the budget sections. These include the Future Budgets in the Narratives area (for years 2009-2012), and the Budget Detail in the Budget area (for 2008-2009).

Question	Response
48. I have read this section	Yes/No

## **Budget Expenditure**

The "Budget Expenditure" column contains Function/Object codes. Select the function and object codes according to your normal business practices. These assignments should align with the state-mandated accounting guidelines. Add as many rows as needed to fully describe your purchases. See the "Budget Detail: Year 1" section of the Guidelines for a listing and explanation of the function/object codes.

## **Amount (E-Fund Request)**

Enter the requested E-Fund amount in the "Amount (E-Fund Request)" column. If you are providing an E-Rate and/or Local Matching Funds value, and you are not requesting E-Fund dollars for this item, you enter a "0" in the "Amount (E-Fund Request)" column. NOTE: This column is called "Amount" in the "Budget Detail" section.

## **Category (categories in the dropdown follow)**

- TECHNICAL SUPPORT
  - TS1 - Technical Support
  - TS2 - Technical Support Training
- TELECOM
  - TE1 - Telecom Equipment (e.g., Routers, Servers)
  - TE2 - WAN Backbone
  - TE3 - Building to Building Connection(s)
  - TE4 - Other Telecom
  - TE5 - Internal Building or Classroom Connections
- CONTENT
  - CO1 - Content Equipment (e.g., Video Conferencing, Application Servers)
  - CO2 - Professional Development
  - CO3 - Initial Year Licensing
  - CO4 - Other Content

## **Recurring Cost**

If this item will be a recurring cost, rather than a one-time purchase, select "Yes".



**Detailed Description**

Enter what is being purchased. (e.g., 100 routers; 150 licenses; project management; technical support training)

**E-Rate Funds**

E-Rate must be used to defray any costs, where applicable. This amount also serves as part of the matching funds requirement in the legislation. If E-Rate matching funds are not used for this item, enter a "0".

**Local Match**

The legislation requires 100% matching funds for the project. If the total E-Rate amount is not sufficient to provide the 100% match, then local funding must provide the rest. Enter this amount, from any other source, in this column. If local matching funds are not used for this item, enter a "0".

NOTE: The matching funds requirement need not be indicated on every individual line item but it must match the overall cost of the project.

**Total Cost**

To obtain the "Total Cost" for any item, manually add all amounts entered in the following: Amount (E-Fund Request), E-Rate Funds, Local Match.

### ***Future Budget: 2009-2011***

Years 2-4 have separate sections in the online application, but are identical in content.

Principle: Help ensure cost-efficient methods for sharing instructional and learning information/content statewide.

#### Mandatory

Question	Response
Does the project extend to the X year? If the answer to this question is YES, please complete the following table.	Yes/No

Please complete the budget for X. Enter '0' if not applicable. Total Cost is the manual sum of E-Fund, E-Rate, and Local Match monies.

#### Mandatory, if applicable

Budget Expenditure	Amount (E-Fund Request)	Category	Recurring Cost	Detailed Description	E-Rate Funds	Local Match	Total Cost (manually add)
		[dropdown]	[yes/no]	[100 char textbox]			

NOTE: See the list of eligible expenditures on the following Budget Detail page.

### ***Budget Detail: 2008-2009***

Principle: Help ensure cost-efficient methods for sharing instructional and learning information/content statewide.

#### Mandatory

Budget Expenditure	Amount [E-Fund Request]	Category	Recurring Cost	Detailed Description	E-Rate Funds	Local Match	Total Cost (manually add)
		[dropdown]	[yes/no]				

Note: If you are providing either an E-Rate or Local Matching Funds value, and you are not requesting E-Fund dollars, you must enter a "0" in the Amount E-Fund Request column.

Note: This list is contained in the drop-down in all budget year sections.

List of Eligible Expenditures
1000/100 - Instructional Salaries
1000/200 - Instructional Benefits
1000/300 - Instructional Purchased Professional and Technical Services and Content Subscriptions
1000/500 - Instructional Other Purchased Services Communications/Print/Travel
1000/600 - Instructional Software and Supplies
1000/700 - Instructional Property Equipment - Original and Additional
2200/100 - Staff Support Services Salaries
2200/200 - Staff Support Services Benefits
2200/300 - Staff Support Services Professional and Technical Contract Services and Content Subscriptions
2200/500 - Staff Support Services Other Purchased Services Communications/Print/Travel
2200/600 - Staff Support Services Software and Supplies
2200/700 - Staff Support Services Property Equipment-Original and Additional
2600/100 - Operation and Maintenance Salaries
2600/200 - Operation and Maintenance Benefits
2600/300 - Operation and Maintenance Purchased Professional and Technical Services and Content Subscription Services
2600/500 - Other Purchased Services Communications/Print/Travel
2600/600 - Operation and Maintenance Software and Supplies

<b>List of Eligible Expenditures</b>
2600/700 - Central Support Service Property Equipment-Original and Additional
2800/100 - Central Support Services Salaries
2800/200 - Central Support Services Benefits
2800/300 - Central Support Services Purchased Professional and Technical Services and Content Subscription Services
2800/500 - Other Purchased Services Communications/Print/Travel
2800/600 - Central Support Services Software and Supplies
2800/700 - Central Support Service Property Equipment-Original and Additional
4400/300 - Architecture and Engineering Services/Educational Specification Improvements Purchased Professional and Technical Services
4400/530 - Architecture and Engineering Services/Educational Specification Improvements Communications